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Amendments to the Specification:

Please amend the paragraph beginning on page 1, line 14, as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims priority from U.S. Provisional Patent Applications S/N 60/254,137(to be assigned), entitled: NETWORK CONTROLLER FOR DIGITALLY CONTROLLING REMOTE DEVICES VIA A COMMON BUS filed on December 8, 2000, the contents of which are incorporated herein by reference.

Please amend the paragraph beginning on page 9, line 7, as follows:

In some embodiments, the remote device 36 may include a network device interface (NDI), not illustrated, connected to the network 25. The NDI is used in embodiments in which transducers, whether sensors or actuators, cannot communicate directly with the network controller. The NDI receives and interprets commands from the network controller and controls signal conditioning, such as receiving data from sensors or activating actuators, based on the commands and data from the network controller. The NDI further includes a block of stack memory for storing the data and/or messages from the sensors and/or actuators. In this embodiment, the network controller is capable of pushing data on or popping data off of the top the stack memory. Also, the NDI can receive, format and send data from the signal conditioning devices to the network controller. As the present invention is focused on the controller, the various embodiments below do not mention the communication between the network controller and NDI, but instead depict the remote device as communicating with the network controller. It must be understood that in some embodiments, the remote devices will include needed components to properly communicate with the network controller, while in other embodiments, a NDI will be needed. As such, the various communications of the remote devices discussed below may be performed by either the remote device or a NDI. A complete detailed disclosure of such a NDI is provided in U.S. Provisional Patent Application Number 60/254,136(to be determined) entitled: NETWORK INTERFACE DEVICE FOR DIGITALLY INTERFACING RIMOTE DEVICES TO A CONTROLLER VIA A NETWORK and filed on December 8, 2000, and U.S. Patent Application Number 09/735,146(to be determined) entitled: NETWORK

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DEVICE INTERFACE FOR DIGITALLY INTERFACING DATA CHANNELS TO A CONTROLLER VIA A NETWORK filed on December 12, 2000. The contents of this patent application are incorporated in its entirety herein by reference.

Please amend the paragraph beginning on page 19, line 1, as follows:

Generally, the commands included within the command set of the protocol fall into three broad categories, service commands, data commands and memory commands. Many of the commands of the network protocol are described below in Table 3. It should be noted, however, that the description of the commands below are intended to be illustrative, and not exhaustive, of the commands within the command set the network controller and remote devices can interpret. Some of the described commands may not be implemented in some embodiments, and other commands may be used in other embodiments, without departing from the spirit and scope of the present invention. A detailed disclosure of the commands directed at remote device processing is also provided in U.S. Provisional Patent Application Number 60/254,136(to be determined) entitled: NETWORK INTERFACE DEVICE FOR DIGITALLY INTERFACING REMOTE DEVICES TO A CONTROLLER VIA A NETWORK and filed on December 8, 2000, and U.S. Patent Application Number 09/735,146(to be determined) entitled: NETWORK DEVICE INTERFACE FOR DIGITALLY INTERFACING DATA CHANNELS TO A CONTROLLER VIA A NETWORK filed on December 12, 2000.